

**IN THE UNITED STATES DISTRICT COURT FOR THE  
EASTERN DISTRICT OF VIRGINIA  
Alexandria Division**

AMPEREX TECHNOLOGY LIMITED,	)	
	)	
<i>Plaintiff/Counter-Defendant,</i>	)	
v.	)	
	)	Case No. 1:23-cv-272 (PTG/LRV)
SEMICONDUCTOR ENERGY LABORATORY	)	
CO., LTD.,	)	
	)	
<i>Defendant/Counter-Plaintiff.</i>	)	

**MEMORANDUM OPINION AND ORDER**

This matter comes before the Court for claim construction. Plaintiff/Counter-Defendant Amperex Technology Limited (“Amperex” or “ATL”) filed this civil action against Defendant/Counter-Plaintiff Semiconductor Energy Laboratory Co., Ltd. (“SEL”) seeking a declaratory judgment of non-infringement of SEL’s Patent, U.S. Patent No. 10,741,828 (“the ’828 Patent”). *See* Dkt. 1 (“Compl.”). ATL is a Hong Kong corporation that manufactures, imports, markets, and sells lithium-ion batteries in the United States. SEL is a Japanese company that invests heavily in the research, development, and patenting of various technologies, including lithium-ion secondary batteries, and generates some portion of its revenue from its patents. The crux of the parties’ dispute is SEL’s belief that ATL is using SEL’s technology in ATL’s batteries without a license and ATL’s conviction that its batteries do not infringe on SEL’s patent.

**BACKGROUND**

At the heart of this controversy lies a lithium-ion battery and its constituent particles. Lithium secondary batteries, also known as rechargeable lithium-ion batteries, power many of the devices people use in their daily lives such as mobile phones, smartphones, tablets, and laptops.

As many people may experience, the capacity of these batteries to hold a charge degrades over time.

The batteries are comprised of an anode (negative electrode), cathode (positive electrode), separator, electrolyte, and two current collectors (one positive and one negative). The electrolyte carries positively charged lithium ions between the anode and cathode, creating free electrons in the anode, which creates a charge at the positive current collector. The electrical current flows from the positive current collector, through the device being powered, to the negative current collector. During discharge, the anode releases lithium ions to the cathode, and while charging the battery, the cathode releases lithium ions to the anode. Degradation occurs, in part, because the lithium ions typically sit in the electrolyte solution where they cycle between the anode to the cathode while being charged or when in use. Exposure to the electrolyte solution causes the positive electrode active material (“PEAM”) particle to crack or break, effectively weakening the particle. The PEAM particle may be observed through a transmission electron microscope (“TEM”).

On August 11, 2020, SEL received the ’828 Patent from the U.S. Patent and Trademark Office (“PTO”) titled, “Positive Electrode Active Material Including Lithium Cobaltate Coated with Lithium Titanate and Magnesium Oxide.” Dkt. 23, Ex. 1 (“’828 Patent”). The ’828 Patent seeks to prevent or slow the degradation of the PEAM particle. It does so by using an outer coating layer, including in the cracks (which can form during charging/discharging), to protect the PEAM particle against degradation caused by its exposure to the electrolyte solution in the battery and to increase cycle performance of the battery.

On February 28, 2023, ATL filed its Complaint seeking declaratory judgment of non-infringement. Dkt. 1. On June 5, 2023, SEL filed its Answer and Counterclaims against ATL,

alleging infringement of the '828 Patent.<sup>1</sup> Dkt. 23. SEL alleges that ATL infringes Claims 1, 2, and 4 of the '828 Patent. Pursuant to the Rule 16(b) Scheduling Order, the parties stipulated to constructions of certain claim terms, which the Court now adopts. Dkts. 62, 90. The parties still dispute three remaining claim terms: “crack portion”; “present in a crack portion”; and “relative value of a concentration.” The parties have fully briefed the issue and provided a technical tutorial to the Court. Dkts. 91–93, 106–08, 145, 160. On October 21, 2024, the Court held a *Markman* hearing. Dkt. 169. Having considered the parties’ briefs, the exhibits attached thereto, and counsels’ arguments at the hearing, the Court now construes the three disputed claim terms.

## LEGAL STANDARD

### A. *Claim Construction*

Claim construction is a critical component of a patent infringement case because it assists the Court in “determin[ing] the meaning and scope of the patent claims asserted to be infringed.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996). “The proper construction of [a] patent [is] a question of law.” *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 325 (2015) (citing *Markman*, 517 U.S. at 388–91). It is well established that “claim terms are to be given their ordinary and customary meaning.” *Aventis Pharms. Inc. v. Amino Chems. Ltd.*, 715 F.3d 1363, 1373 (Fed. Cir. 2013); *see e.g., Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc).

“[T]he ordinary and customary meaning . . . is the meaning that the term would have to a person of ordinary skill in the art [(“POSITA”)] in question at the time of the invention[.]” *Phillips*,

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<sup>1</sup> The Counterclaim also alleged that SEL infringed ATL’s U.S. Patent No. 11,043,660 (“’660 Patent”). Dkt. 23. On June 28, 2024, the Court entered the parties’ stipulation of voluntary dismissal as to the ’660 Patent. Dkt. 98.

415 F.3d at 1313. Thus, a POSITA is “deemed to read the words used in the patent documents with an understanding of their meaning in the field, and to have knowledge of any special meaning and usage in the field.” *Netscape Commc’ns. Corp. v. ValueClick, Inc.*, 684 F. Supp. 2d 678, 685 (E.D. Va. 2009) (quoting *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998)).

“[T]he [patent’s] specification is always highly relevant to the claim construction analysis . . . [I]t is the single best guide to the meaning of a disputed term.” *Phillips*, 415 F.3d at 1315 (quoting *Vitronics*, 90 F.3d at 1582). Moreover, where an inventor acts as their own lexicographer and offers a specialized definition of claim terms, “the inventor’s lexicography governs.” *Id.* at 1316. Courts follow a “hierarchy of evidence” when construing claim terms: (1) claim language; (2) intrinsic evidence, such as the specification, and prosecution history of the patent; and (3) extrinsic evidence. *Suffolk Techs. LLC v. AOL Inc.*, 942 F. Supp. 2d 600, 605 (E.D. Va. 2013) (citing *Advanced Cardiovascular Sys. v. Medtronic*, 265 F.3d 1294, 1304 (Fed. Cir. 2001)). Critically, a court should examine extrinsic evidence only if the “[intrinsic evidence] does not yield the answer[.]” *Id.* (citing *Vitronics*, 90 F.3d at 1583).

#### **B. Indefiniteness**

Title 35, United States Code, Section 112 contains a “definiteness requirement” because “a patent specification [must] ‘conclude with one or more claims *particularly pointing out and distinctly claiming* the subject matter which the applicant regards as [the] invention.’” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014) (quoting 35 U.S.C. § 112). For a patent’s claim to meet this definiteness requirement, it must, when “viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Id.* at 910. “A lack of definiteness renders invalid ‘the patent or any claim in suit.’”

*Id.* at 902 (quoting 35 U.S.C. § 282). Definiteness is determined by a POSITA at the time the patent was filed. *Id.* at 908. The party contending that a patent claim is indefinite carries the burden to prove it by clear and convincing evidence. *See BASF Corp. v. Johnson Matthey Inc.*, 875 F.3d 1360, 1365 (Fed. Cir. 2017).

### ANALYSIS

The parties primarily dispute three claim terms central to the '828 Patent. These terms appear in claims 1 and 2 of the '828 Patent, as reproduced here:

1. A lithium-ion secondary battery comprising a positive electrode active material layer comprising:

a positive electrode active material particle comprising a first transition metal, a second transition metal, a representative element, and fluorine, wherein the representative element and the fluorine are **present in a crack portion** observed from a TEM image in the positive electrode active material particle . . .

2. wherein **a relative value of a concentration** of the second transition metal is greater than or equal to 0.05 and less than or equal to 0.4 when a surface of the positive electrode active material particle is subjected to an XPS analysis and a concentration of the first transition metal is defined as 1.

'828 Patent, 76:17–24, 26–32 (emphasis added).

#### *1. “crack portion”*

ATL asserts that the proper construction of the phrase “crack portion” is “a crack or break formed in a particle.” Dkt. 92 at 7. ATL contends that this definition is lifted from the “specification’s express definition of the term” and thus reflects the patentee acting as its own lexicographer. *Id.* at 8 (citing '828 Patent, 9:55–60). According to ATL, this Court should accept its construction because it is derived from the specification’s definition of segregation and thus reflects the patentee’s lexicographic intentions. *Id.* Separate and apart from the words themselves,

however, ATL further argues that this Court should construe this definition of “crack portion” to include the space created by the crack, not merely the particle walls. *Id.*

SEL counters that “crack portion” should be given its plain and ordinary meaning, “a portion containing a crack or break,” for three reasons. Dkt. 91 at 8. First, since the specification dictates that a “crack portion” be “observed from a TEM image in the [PEAM] particle,” “[t]he void created by the crack is not part of the [PEAM] particle.” *Id.* at 9. Second, the specification focuses on the “presence of a representative element and fluorine in the walls of the crack portion,” not in the void created by the crack. *Id.* Third, because the claimed invention is designed to protect the PEAM particle itself from the electrolyte solution that fills the void, including the void does not reflect the purpose of the invention. *Id.* at 9–10. SEL further argues that “a crack or break formed in a particle” offers no clarity as to whether “crack portion” includes the void created by the crack and thus should be discarded. *Id.* at 10.

This Court agrees in part with SEL. The Court begins with “[t]he inquiry into how a person of ordinary skill in the art understands a claim term.” *Phillips*, 415 F.3d at 1313. Neither party attempts to argue that a POSITA would understand “crack portion” in a way that conforms to their construction.<sup>2</sup> Moreover, neither the plain language of SEL’s proposed construction, “a portion containing a crack or break,” nor that of ATL’s proposed construction, “a crack or break formed

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<sup>2</sup> In further support of its construction, however, SEL filed a Notice of Supplemental Authority attaching a Non-Final Office Action from the Patent and Trademark Office (“PTO”) in the *Ex Parte* Reexamination Proceedings of the ’828 Patent. *See* Dkt. 185, Ex. A. The Court notes that “reexamination proceedings and court actions involving challenges to validity [are] distinct and independent . . .” *In re Etter*, 756 F.2d 852, 857 (Fed. Cir. 1985), *cert. denied*, 474 U.S. 828 (1985). Although the Court does not rely on this decision, the Court takes judicial notice that the Examiner describes “Ti [titanium], Mg [magnesium], and F [fluorine] segregating in the surfaces inside of the cracks and cracks and crystal defects.” *Id.* at 5; *see also* Fed. R. Evid. 201. This suggests to the Court that a POSITA would understand “crack portion” to mean the walls of the particle or crack not the void created by the crack.

in a particle,” clearly intimate the distinction the parties truly seek: whether “crack portion” includes the void created by the crack.

ATL’s proposed construction relies on a single sentence in the specification and a figure representing a crack within a PEAM particle. The sentence recites: “[A] crack portion *refers to* a crack or break formed in a particle like a crack portion 106 illustrated in FIG. 1C.” ’828 Patent, 9:58–60 (emphasis added). While the Court agrees with ATL that the specification’s use of the phrase “refers to” is definitional, “a crack or break formed in a particle like a crack portion 106 illustrated in FIG. 1C” does not address whether “crack portion” includes the void. Dkt. 108 at 2 (citing *Parkervision, Inc. v. Vidal*, 88 F.4th 969, 976–77 (Fed. Cir. 2023)). Indeed, ATL points to no evidence, other than the figure, to support its conclusion that the specification’s definition includes the void created by the crack rather than an attempt to demonstrate “where the crack portion of the PEAM particle is located.” Dkt. 106 at 4; ’828 Patent, 9:58–60. In addition, the figure does not obviously include the void since region 103, also represented in Fig. 1C, is not clearly in the “void” of the crack so much as outlining the walls of the crack.

The meaning of “crack portion” is best understood when compared to a pie. Once a slice of the pie has been cut out and removed, the slice’s absence exposes the empty pie tin. The exposed empty tin is not considered part of the pie. It stretches credulity to think that the patentee would claim the empty tin in this analogy, much less the void created by the crack in the PEAM particle. ATL offers no reason why the patentee would include the void, nor does ATL contend that a POSITA would understand that “crack portion” includes the void.

SEL asserts that ATL’s construction conflicts with the plain language of the claim. Dkt. 106 at 3. SEL notes that the sentence from which “crack portion” is drawn reads: “present in a crack portion . . . *in* the positive electrode active material particle.” *Id.* (emphasis added). Since



a void cannot be part of the PEAM particle, it cannot be correct that crack portion includes the void. “In some cases, the ordinary meaning of claim language as understood by a [POSITA] may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” *Phillips*, 415 F.3d at 1314. In the absence of a persuasive argument to the contrary, this Court finds it readily apparent that “a crack portion . . . in the [PEAM] particle” does not include the empty space created by the crack.

Moreover, “in clarifying the meaning of claim terms, courts are free to use words that do not appear in the claim so long as ‘the resulting claim interpretation . . . accord[s] with the words chosen by the patentee to stake out the boundary of the claimed property.’” *Pause Tech., LLC v. TiVo, Inc.*, 419 F.3d 1326, 1333 (2005) (quoting *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998)). As stated, this Court finds the greater context in which the term “crack portion” is used in the claim language to be instructive. *See Phillips*, 415 F.3d at 1314; *ACTV, Inc. v. Walt Disney Co.*, 346 F.3d 1082, 1088 (Fed. Cir. 2003) (“[T]he context of the surrounding words of the claim also must be considered in determining the ordinary and customary meaning of those claims.”). Because the claim describes “present in a crack portion . . . in the [PEAM] particle,” this Court is persuaded that the claim term “crack portion” refers to the walls of the crack, not the void created by the crack.

This Court finds that “crack portion” does not include the void created by the crack because this reading comports with the plain language of the claim and aligns with the patent’s specification.<sup>3</sup> However, the Court finds ATL’s definition persuasive because the specification

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<sup>3</sup> The parties dispute whether the Court can properly consider the purpose of the invention to construe the claim language. *Compare Source Vagabond Sys. Ltd. v. Hydrapak, Inc.*, 753 F.3d 1291, 1301 (Fed. Cir. 2014) (noting that claim construction is a function of the words of the claim,



defines “crack portion” as “a crack or break formed in a particle.” Accordingly, the Court adopts ATL’s construction of “crack portion” to be “[a] crack or break formed in a particle” but rejects ATL’s interpretation that this construction also includes the void.

**2. “present in a crack portion”**

Next, the parties dispute whether “present in a crack portion” should be given its plain and ordinary meaning or, whether it should be construed as “non-uniformly distributed in a portion containing a crack or break.” ATL argues that the phrase should be given its plain and ordinary meaning because this comports with the claim language and because the phrase does not appear in the specification. Dkt. 92 at 11. SEL contends that the phrase should be construed to mean “non-uniformly distributed in a portion containing a crack or break” because the patentee has disavowed ATL’s preferred construction. Dkt. 106 at 9. In addition, SEL argues that the specification’s description of “the presence of protective elements in a crack in a manner that departs from its plain meaning” provides support for disavowal. *Id.* at 7. In response, ATL further rejects SEL’s construction because the standards for disavowal have not been met and because the common rule of claim construction cautions against reading limitations from the specification into the claims. Dkt. 108 at 13–17.

This Court agrees with ATL. As stated above, the claim construction inquiry begins with the claim language, by giving disputed terms their plain and ordinary meaning as understood by a

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not the purpose of the invention) (internal quotations omitted) *with Am. Radio, LLC v. Qualcomm Inc.*, 2013 WL 3270404, at \*9 (C.D. Cal. May 23, 2013), *aff’d*, 578 F. App’x 975 (Fed. Cir. 2014) (“But downconverting to an intermediate frequency before digitization would frustrate the purpose of the invention.”); *Uniloc 2017 LLC v. Samsung Elecs. Am., Inc.*, 2020 WL 248880, at \*10 (E.D. Tex. Jan. 16, 2020) (“[T]he Court rejects any argument by Plaintiff that would defeat the stated purpose of the alleged invention.”). Given the parties’ conflicting authority on the persuasiveness of the purpose of the invention, the Court need not address this argument to arrive at the same conclusion: “crack portion” does not include the void.

POSITA. *Phillips*, 415 F.3d at 1313–14. Neither party advances an argument about how a POSITA would understand the phrase “present in a crack portion.” The specification “is the single best guide to the meaning of a disputed term.” *Id.* at 1315. However, SEL’s reliance on the specification’s definition of segregation fails to offer any greater clarity on the meaning of “present in a crack portion.” As ATL argues, the meaning of “present in” as “exist[ing] in a particular location” is plain.<sup>4</sup> Dkt. 92 at 11. The claim language does no more than specify how this presence may be observed—“from a TEM image”—and provide a range for the “relative value of a concentration for the second transition metal.” The absence of any further distinction, as ATL contends, suggests “present in a crack portion” is broad and, thus, not necessarily limited in the way SEL proposes. “Courts may not rewrite claim language based on what has been omitted from a claim[.]” *Resonate Inc. v. Alteon Websystems, Inc.*, 338 F.3d 1360, 1365 (Fed. Cir. 2003).

Nonetheless, SEL insists that “present in a crack portion” must be construed as “non-uniformly distributed” because the patentee has disavowed uniform distributions.<sup>5</sup> Dkt. 91 at 12. This argument has no basis in the claim language or the specification. SEL notes that the specification describes and defines segregation as “a phenomenon in which, in a solid made of a plurality of elements (e.g., A, B, and C), a certain element (for example, B) is non-uniformly distributed” and consistently refers to elements being segregated or regions being formed via

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<sup>4</sup> *Present*, *Merriam-Webster Online Dictionary*, <https://www.merriam-webster.com/dictionary/present> (last visited May 27, 2025) (defining “present” as “now existing or in progress”; “being in view or at hand”; “existing in something mentioned or under consideration”). Where the “ordinary meaning of claim language . . . may be readily apparent . . . general purpose dictionaries may be helpful” to aid the court in claim construction. *Phillips*, 415 F.3d at 1314 (citation omitted).

<sup>5</sup> SEL contends that “[t]he critical advance set forth in the ‘828 Patent is to heat the PEAM particle in a manner that causes fluorine and a representative element to be distributed non-uniformly in crack portion(s) that would otherwise be exposed to electrolyte solution (and thus to degradation).” Dkt. 91 at 3. Uniform distribution would not create a barrier from the electrolyte solution. *Id.* at 4–5.

segregation. Dkt. 106 at 9–10 (citing '828 Patent, 8:25–28). This observation is correct; however, it does not clearly show that the patentee disavowed other methods which may result in the presence of “[a] representative element and [] fluorine” in the crack portion more than merely praise segregation.

“To disavow claim scope, the specification must contain ‘expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.’” *Cont’l Cirs. LLC v. Intel Corp.*, 915 F.3d 788, 797 (Fed. Cir. 2019) (quoting *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 653 F.3d 1296, 1306 (Fed. Cir. 2011)). SEL relies on a passage in the specification describing segregation in the third region as evidence that the patentee disparages other methods or the prior art. Dkt. 106 at 11–13 (citing '828 Patent at 21:38–49). Yet, this passage also uses words like “can be formed” and “[i]n the case where the third region 103 is formed through the heating as described above.” '828 Patent at 21:50–51 (emphasis added). As ATL notes, this is language of possibility not exclusion. *Cont’l Cirs. LLC*, 915 F.3d at 797–98 (concluding language like “one technique,” “a way,” and “can be carried out,” was not a clear disavowal). Indeed, the word “uniform” does not appear in the specification with reference to the formation or presence of these regions.

Moreover, even if the specification described embodiments which were limited to the non-uniform distribution of the representative element and fluorine, to construe “present in a crack portion” accordingly would read a limitation from the specification into the claim language. See *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1218 (Fed. Cir. 2014) (cautioning against importing limitations from the specification); see also *Phillips*, 415 F.3d at 1312 (“[I]t is ‘unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms.’” (quoting *White v. Dunbar*, 119 U.S. 47, 52 (1886))). SEL does not argue

that a POSITA would understand “present in a crack portion” to be limited to non-uniform distributions of the representative element and fluorine, nor has SEL shown that the patent claims or specification require that result. Accordingly, the Court construes “present in a crack portion” in accordance with its plain and ordinary meaning.

**3. “relative value of a concentration”**

Lastly, the parties dispute whether “relative value of a concentration” is sufficiently definite to give a POSITA clear notice of the scope of the invention. ATL argues that it does not because the claim language is silent as to the appropriate units of measurement. Dkt. 93 at 20. In addition, it asserts that a POSITA would know that the concentration may be measured by atomic percentages or weight percentages. *Id.* Comparatively, SEL first contends that the phrase is sufficiently definite because the claim language provides clear upper and lower bounds on the “relative value of a concentration.” Dkt. 91 at 17. In the alternative, SEL asserts that because the specification only discusses atomic percentages in relation to XPS analysis, the patent is clear that the relevant measurement unit is atomic percentages. Dkt. 106 at 16.

This Court agrees with SEL. “[D]efiniteness is to be evaluated from the perspective of someone skilled in the relevant art.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 909 (2014) (citing *Gen. Elec. Co. v. Wabash Appliance Corp.*, 304 U.S. 364, 371 (1938)). “[A] patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Id.* at 910. ATL notes that “relative value of a concentration” does not state whether the value should be measured in terms of the atomic percentage or weight percentage. Dkt. 93 at 20. Indeed, the ’828 Patent repeats the phrase “relative value of a concentration” throughout the specification without further indicating the appropriate unit of measurement. ’828 Patent at 18:65–67, 19:1–11, 68:47–49.

Despite the patent’s apparent silence as to units, the *Nautilus* standard does not require the patent to specify the unit so long as a POSITA is “inform[ed] . . . about the scope of the invention with reasonable certainty.” *Nautilus, Inc.*, 572 U.S. at 910; *Presidio Components, Inc. v. Am. Tech. Ceramics Corp.*, 875 F.3d 1369, 1377 (Fed. Cir. 2017) (requiring only that “[the claims] be capable of measurement in terms of a standard unit.”); *see also Vifor Fresenius Med. Care Renal Pharma Ltd. v. Lupin Atlantis Holdings SA*, 2019 WL 4222673, at \*3 (D. Del. Sept. 5, 2019) (“But ‘[i]f such an understanding of how to measure the claimed [feature] was within the scope of knowledge possessed by one of ordinary skill in the art, there is no requirement for the specification to identify a particular measurement technique.’” (quoting *Ethicon Endo-Surgery, Inc. v. Covidien, Inc.*, 796 F.3d 1312, 1319 (Fed. Cir. 2015) (alteration in original))).

As SEL points out, the claim specifies that the “relative value of a concentration of the second transition metal is *greater than or equal to 0.05 and less than or equal to 0.4*. . . is subjected to an XPS analysis and a concentration of the first transition metal is defined as 1.” Dkt 91 at 18 (citing ’828 Patent at 76:26–31) (emphasis added). Thus, here, in assigning a range to the relative value and specifying the appropriate instrument, the patent provides reasonable certainty as to how to measure the relative value of a concentration.<sup>6</sup> “[E]ven where the claims require a particular test result, there may be (and often are) disputes between the parties as to the proper application of the test methodology in the circumstances of an individual case. But those disputes are disputes

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<sup>6</sup> The Court takes judicial notice that, in keeping with SEL’s construction and the ’828 Patent’s specification, the PTO Examiner did not specify a unit of measurement used to determine the concentration ratio. *See* Fed. R. Evid. 201. Nonetheless, the Examiner was able to perform an XPS analysis to determine whether the “representative element and fluorine are present.” *See* Dkt. 185, Ex. A, at 5–6. While the Court does not rely on this office action, it is probative of whether a POSITA would find the claim to be sufficiently definite.

about whether there is infringement, not disputes about whether the patent claims are indefinite.”

*Presidio Components, Inc.*, 875 F.3d at 1377.

For this reason, this Court agrees with SEL that this case is unlike *Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc.* and *Dow Chemical Co. v. Nova Chemicals Corp.*<sup>7</sup> 789 F.3d 1335 (Fed. Cir. 2015); 803 F.3d 620 (Fed. Cir. 2015). Under the *Nautilus* standard, claim terms are indefinite only if none of the patent claims, specification, nor prosecution history offer any guidance as to which method among multiple should be used. *Dow Chem. Co.*, 803 F.3d at 634. The Federal Circuit determined no such guidance existed in *Dow* and *Teva* before concluding the relevant terms were indefinite. *Id.* at 634–35. Conversely, here, the patent claim language and specification offer several pieces of guidance. First, the claim recites, “wherein a relative value of a concentration... is subjected to an XPS analysis” which clarifies the desired measurement tool. ’828 Patent at 76:26–31. Second, the specification contains a measurable range which, as stated, suggests the claims are sufficiently definite. Third, the specification discusses weight percentages in the context of fabricating a secondary battery not evaluating an “existing secondary battery.” Dkt 106 at 17 & n.11 (citing the relevant portions of the ’828 Patent). Fourth, the specification only discloses the use of atomic percentages with respect to XPS analysis, suggesting a POSITA would understand that atomic percentage is the appropriate unit of measurement.<sup>8</sup> *Id.* at 16–17.

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<sup>7</sup> *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1344–45 (Fed. Cir. 2015) (holding that because neither the claims, specification, or prosecution history provided consistent guidance as to which of three possible measures to calculate molecular weight, the claim is indefinite); *Dow Chem. Co. v. Nova Chems. Corp.*, 803 F.3d 620, 634 (Fed. Cir. 2015) (holding that because “the required guidance is not provided by the claims, specification, and prosecution history[,]” the claims are indefinite).

<sup>8</sup> ATL contends that because SEL has never attempted to distinguish between weight basis or atomic basis, this Court should disregard any theory it now advances. Dkt. 107 at 30 n.8. ATL offers no authority supporting its assertion. However, because SEL asserts only in its responsive brief that the XPS instrument is only capable of measuring atomic percentages, ATL had no opportunity to dispute this assertion. Thus, the Court will not credit this argument.


Therefore, this Court is persuaded that the claim is sufficiently definite because it provides reasonable certainty as to how to measure the relative value of a concentration.

### **CONCLUSION**

For the foregoing reasons, the Court adopts the following constructions of the disputed claim terms: (1) “crack portion” means “a crack or break formed in a particle” and does not include the void; (2) “present in a crack portion” has its plain and ordinary meaning; and (3) “relative value of a concentration” is definite and given its ordinary meaning.

It is so **ORDERED**.

May 27, 2025  
Alexandria, Virginia

  
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Patricia Tolliver Giles  
United States District Judge